

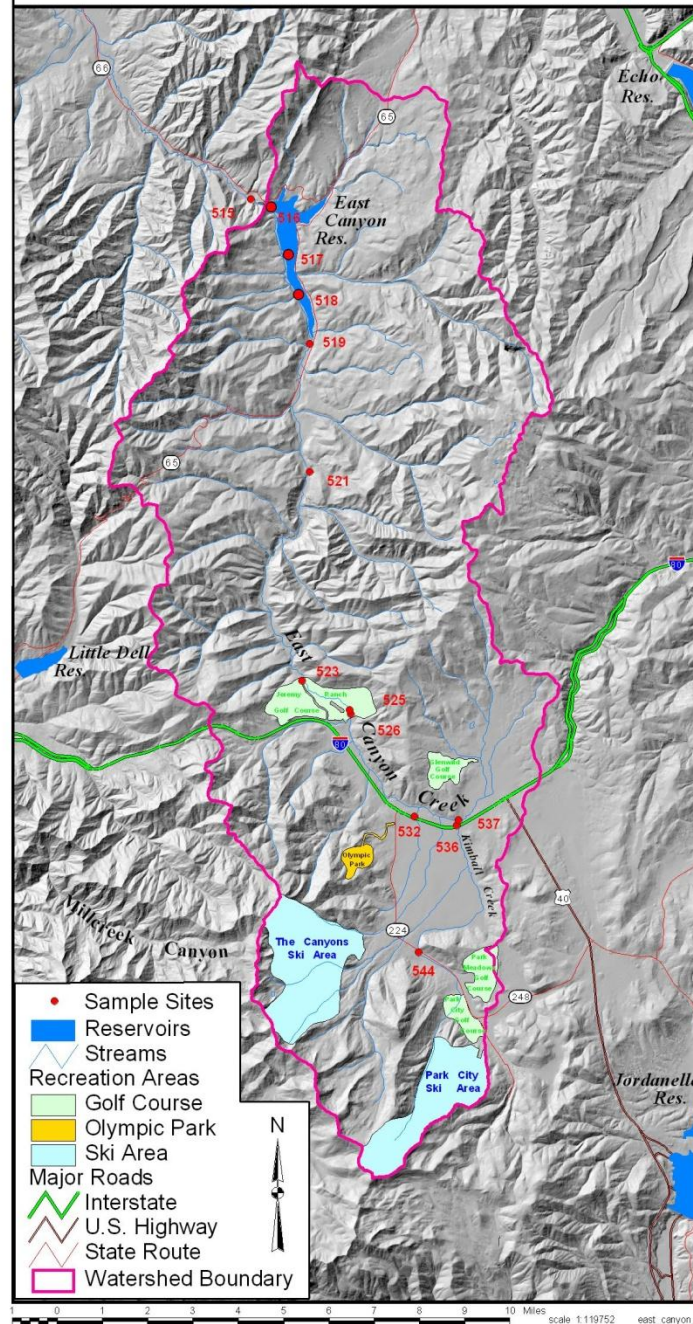
A scenic view of a river flowing through a grassy field. The river is calm, reflecting the sky and clouds. The banks are covered in tall, green grass. In the background, there are several houses and a hillside under a blue sky with scattered clouds.

# 2011 Utah Water Quality Conference


## East Canyon Outreach and Social Marketing Efforts

By  
Lars Christensen  
Upper Weber Watershed  
Coordinator

# Upper East Canyon Watershed





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- Education and outreach efforts began in 2006-2007 with the development of the “Scoop the Poop” campaign.
  - 2010 the new “Stormwater” campaign began.









**SCOOP IT**

IT'S WHAT BEST FRIENDS DO.

WHEN THEY POOP... YOU SCOOP, CARRY AND DISPOSE.

COOPER COUNTY

COOPER COUNTY

COOPER COUNTY



# Scoop the Poop

- Mutt Mitts stations
- Signs
- Poop bags
- Volunteer groups trail clean up
- Radio, Newspaper, Posters
- Web site





# Stormwater Add



Many things that you put on your lawn, like fertilizer and pesticides, end up in the water near you. Driveway and stormwater runoff, including water that runs into storm drains, are some of Summit County's major water pollutants. Learn more at [www.EastCanyonCreek.org](http://www.EastCanyonCreek.org).

**POLLUTE YOUR WATER. POLLUTE YOURSELF.**

SWANER PRESERVE  
AND ECOCENTER  
Utah State University



[www.eastcanyoncreek.org](http://www.eastcanyoncreek.org) | [www.swanerecocenter.org](http://www.swanerecocenter.org) | [www.basinrecreation.org](http://www.basinrecreation.org) | [www.recycleutah.org](http://www.recycleutah.org) | [www.co.summit.ut.us](http://www.co.summit.ut.us) | [www.parkcity.org](http://www.parkcity.org) | [www.sbwrtd.org](http://www.sbwrtd.org)

# EnviroScape NPS Watershed Model





# TMDL?

## East Canyon Creek Needs Your Help!

### Why is East Canyon Creek important to our community?

Designated as a cold water fishery by the Utah Division of Water Quality, East Canyon creek is valued for the habitat it provides to local wildlife (e.g., moose, elk, and fish species), its aesthetic qualities, and recreational opportunities.

### What is wrong with our creek?

Although aquatic plants are a natural part of our streams, overgrowth can cause problems. Aquatic plants (macrophytes) produce oxygen during the day (through photosynthesis), but they use oxygen from the water at night (for respiration). This reduction in oxygen means that fish, especially young ones, can't breathe very well at night! The water quality plan for East Canyon Creek aims to improve dissolved oxygen by reducing the growth of aquatic plants.

## What does our creek need?

### Less sediment and pollution:

The creek's aquatic plants are rooted in fine sediment, which has washed into the creek from eroding stream banks and from activities, like construction, in the watershed. While sediment is the largest pollutant to the creek, lawn and garden fertilizer, dog waste, and other substances have further decreased water quality.

### More shade and fish habitat:

Years ago, willows grew along the creek. However, reduced stream flow, livestock grazing, herbicide use, and intentional clearing have all contributed to the loss of the willows. Without the shade provided by the willows, the creek's aquatic plants thrive in sunlight. Planting trees along the creek will provide shade to discourage nuisance aquatic plant growth and improve fish habitat.

### More water in the summer:

The creek has very low flow during the summer months due to water withdrawals. The low water levels in East Canyon Creek, combined with excessive exposure caused by a lack of shade along the creek, have further fueled the growth of aquatic plants. In addition, low flows contribute to warmer water that is also stressful to fish. A minimum flow needs to be maintained in the creek during the summer.

## What can you do to help the creek?

Many efforts are currently underway in the watershed to improve water quality. The local water reclamation district has upgraded its wastewater treatment facilities. Park City and Summit County are taking steps to reduce pollution from storm water including better enforcement of pollution discharges from active construction sites. Stream restoration projects funded by state and federal programs are ongoing in the watershed and include plantings, bank stabilization, livestock exclusion, and creation of pools as fish refuges.

### Plant Trees

Trees help to shade the creek, which reduces temperature and macrophyte growth. Stream restoration projects involving tree planting are already underway at several locations along the stream.



### Stabilize Stream Banks

Stabilizing eroding banks reduces fine sediments thereby reducing aquatic plant growth and improving fish habitat. Bank stabilization treatments have been installed on several sections of East Canyon Creek.



### Reduce Pollution:

- Keep livestock away from the creek.
- Reduce pollution runoff from your property by minimizing fertilizers and pesticides.
- Ask your lawn care provider to test your soils and only apply fertilizer where and when it is needed.
- Sweep excess fertilizers and grass clippings off hard surfaces (sidewalks and driveways) before a storm.
- Slow the flow of water from your property by diverting water to low lying areas.
- Encourage local contractors to eliminate runoff from construction sites and follow water quality protection measures required by City and County regulations.



### Donate Water Rights:

You can donate water rights to protect the fishery! Snyderville Basin Water Reclamation District, in partnership with the East Canyon Watershed Committee, is actively pursuing senior water rights to establish a protected baseflow in the creek.

## Get involved!

Attend the next East Canyon Watershed Committee meeting.

[www.eastcanyoncreek.org](http://www.eastcanyoncreek.org)

For help with any of these actions, contact your watershed coordinator, Lars Christensen.

[christensen.lars@yahoo.com](mailto:christensen.lars@yahoo.com)



# Phosphorus Flyer

## Is your project located on a phosphorus-rich soil?

### Reducing Impacts to Water Quality

#### Why is phosphorus a problem for water quality in East Canyon Creek?

Phosphorus is a nutrient that contributes to the growth of aquatic plants and algae. While some algal growth is welcomed, excessive growth can be harmful. As algae decompose they remove oxygen from the surrounding water. With lower levels of oxygen, our fish are stressed and may suffocate.

#### Soils overlying the Park City Phosphoria Formation are naturally phosphorus-rich

A major source of phosphorus in the East Canyon watershed is runoff from construction sites, especially those that occur on the Park City Phosphoria Formation. A natural geologic component of the mountains found near Park City, the Phosphoria Formation has exceptionally high concentrations of phosphorus (on the order of 10 – 100 times background concentrations). As storm water erodes the soil on the Formation, it flows ultimately into East Canyon Creek and Reservoir and degrades water quality.

#### Advanced mitigation measures to include on permits for construction on phosphorus-rich soils

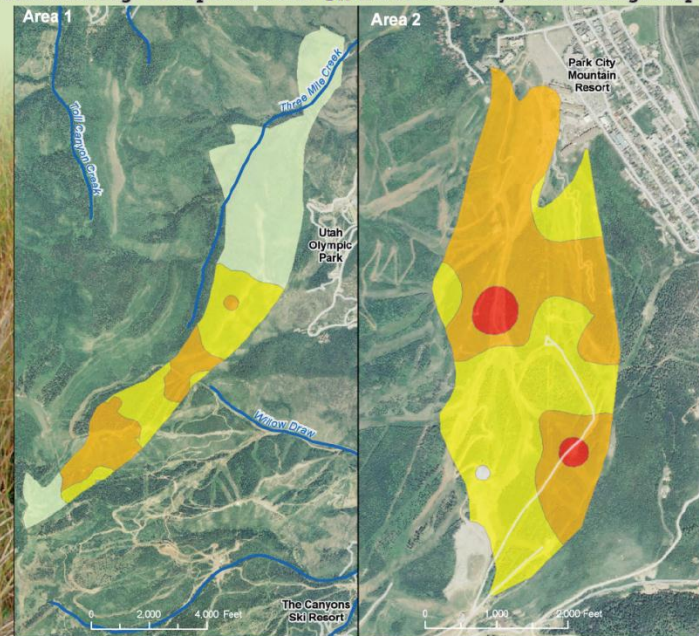
The following advanced Best Management Practices (BMPs) should be used for construction sites that occur on phosphorus-rich soils:

- **Exceptional care to minimize sediment runoff:**
  - Minimize clearing
  - Schedule construction activities to reduce chance of large storm event during project
  - Phase construction to minimize soil exposure
  - Stabilize all exposed soils using erosion control materials such as silt screen fencing and mulches, mats, or blankets (straw, fiber, wood chips, coconut fiber matting)
  - Stabilize temporary stockpiles of soil
- **Small projects (<10 acres):** Build sediment traps or small infiltration basins with the aim to capture 100% of sediment runoff from the project site
- **Large projects (>10 acres):** Use stormwater detention ponds with outlets designed for release only in a 5-year (rather than a 2-year) 24-hour storm event
- Monitor runoff from project sites to ensure sediment loss from project site is minimal
- Plant native vegetation on all disturbed soils at project completion
- Contain sediment runoff until vegetation is reestablished

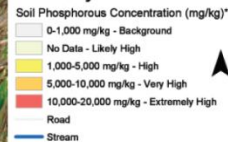
## Is your project in a location with naturally phosphorus-rich soils?

You can determine whether your project is located in a naturally phosphorus-rich soil using the maps on this handout or by visiting an interactive phosphorus mapping site at:

[www.sbwr.org/PhosphaticSoils](http://www.sbwr.org/PhosphaticSoils) OR [www.eastcanyoncreek.org/maptool](http://www.eastcanyoncreek.org/maptool)



#### High Phosphorus Soils in Snyderville Basin



\*Source: East Canyon Creek Watershed Phosphorus Deposit Mapping Final Report, 2008

Imagery taken from National Agricultural Imagery Program (NAIP) natural color aerial photography 1-meter resolution, 2009.

For more information on BMPs and stormwater regulations, please visit one of the following websites:

Summit County Stormwater Ordinance 381:  
[www.co.summit.ut.us/engineering/downloads/381Afinal.pdf](http://www.co.summit.ut.us/engineering/downloads/381Afinal.pdf)

Stormwater Resource Center:  
<http://www.stormwatercenter.net/test.htm>



# Storm Water

- Radio, Newspaper, Posters
- Simplified TMDL
- Phosphorus flyer
- Stormwater model
- Promotional Items
- Web site





# East Canyon Watershed Committee

<http://eastcanyoncreek.org/>

